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| 10/523,467 | 02/01/2005 | Joerg Stierle | 3192 | 1181 |

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Striker Striker & Stenby
103 East Neck Road
Huntington, NY 11743

| EXAMINER | |
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| RADKOWSKI, PETER | |
| ART UNIT | PAPER NUMBER |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/523,467 | STIERLE ET AL. | |
| | Examiner | Art Unit | |
| | PETER RADKOWSKI | 2883 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *19 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/1/2005 and 11/14/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## *Detailed Office Action*

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### *Claims 1-5 and 17-19*

2. **Claims 1-5 and 17-19 are rejected** under 35 U.S.C. 103(a) as being obvious over Geffcken et al. (2,147,156) in view of Burgdorf et al. (2004/0102888).

From hereinafter, Geffcken will stand-in for Geffcken et al. and Burgdorf will stand-in for Burgdorf et al.

**Regarding Claims 1-5 and 17-19**, Geffcken teaches an optical device comprising a circular, adjustable, buttressed, and recessed mirror holder [9] comprising a mirror [3] and an assembly of three adjustable screw pins [10], 11] and [12] with springs [13]. (See Geffcken, figs. 1 and 2)

**Further regarding Claims 1-5 and 17-19**, Geffcken does not explicitly teach that the three adjustable screw pins intersect with the buttresses at holes allowing the adjustable pin to be adjusted outward. However, Burgdorf teaches an adjustable holder [34] comprising screw [31], spring [32], and oblong hole [37]. (See Burgdorf, fig. 3) Since Geffcken and Burgdorf both

teach adjustable screw-spring combinations, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the screw-spring configuration of the mirror holder device taught by Geffcken to have the oblong hole taught by Burgdorf because the resultant configuration would be controllably adjustable and stable. (See Burgdorf, par. [0061], ll. 4-10) One would have been motivated to make this modification because the ability to adjust, align, and securely fix a holder by manipulating a combined screw and spring configuration facilitates and simplifies the alignment process.

***Claims 1-2 and 6-8***

3. **Claims 1-2 and 6-8 are rejected** under 35 U.S.C. 103(a) as being obvious over Geffcken et al. (2,147,156) in view of Burgdorf et al. (2004/0102888) and further in view of Tibbals (3,436,050).

**Regarding Claims 1 and 2,** Geffcken in view of Burgdorf teaches an adjustable mirror holding device. (See above.)

**Regarding Claims 6-8**, Geffcken in view of Burgdorf does not explicitly teach that the base regions of the adjusting pins are embodied in domelike or conical form and rest on a preferably chamfered peripheral region of the blind bores and/or of the radial longitudinal grooves, with threaded adjusting pins mated to threaded bores at an interface coated with plastic.

However, Tibbals teaches domelike adjusting pin mechanism [15] with screw threads [50] mated to receiving threads [51] at a film-lubricated interface, and the screw resting on chamfered buttresses. (See Tibbals, figs. 5 and 7; and col. 6, ll. 60-65)

Since Geffcken, Burgdorf and Tibbals teach alignment devices, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the device of Geffcken in view of Burgdorf to have the configuration of Tibbals because this guards against unintended in situ rotation of the pins. (See Tibbals, col. 4, ll. 55-59). One would have been motivated to make this modification because prevention of unintended motion of the adjusting pins may make it more likely that the optical device will be properly aligned.

***Claims 1-2, 6-7, and 9***

4. **Claims 1-2, 6-7, and 9 are rejected** under 35 U.S.C. 103(a) as being obvious over Geffcken et al. (2,147,156) in view of Burgdorf et al. (2004/0102888), further in view of Tibbals (3,436,050) and further in view of Isenberg (6,910,841).

**Regarding Claims 1 and 2,** Geffcken in view of Burgdorf teaches an adjustable mirror holding device. (See above.)

**Regarding Claims 6 and 7,** Geffcken in view of Burgdorf and further in view of Tibbals teaches an adjustable mirror holding device comprising stable threaded interfaces. (See above.)

**Regarding Claim 9,** Geffcken in view of Burgdorf and further in view of Tibbals does not explicitly teach that the thread of the adjusting pins is embodied as self-forming. However, Isenberg teaches a thread-forming screw [10]. (See Isenberg, fig. 1) Since Geffcken, Burgdorf, Tibbals and Isenberg teach attachments subject to motion, it would have been obvious to one of ordinary skill in the art, at the time of the invention, Since Geffcken, Burgdorf, Tibbals and Isenberg teach the screw configuration taught by Isenberg this configuration increases friction and may avoid loosening of the screw in the bore. (See Isenberg, col. 1, ll. 40-42). One would have been motivated to make this modification because prevention of unintended loosening of attachment points may make it more likely that the optical device will be properly aligned.

***Claims 1-2, 6-7, and 10-13***

5. **Claims 1 –7 and 10 - 13 are rejected** under 35 U.S.C. 103(a) as being obvious over Geffcken et al. (2,147,156) in view of Burgdorf et al. (2004/0102888), further in view of Tibbals (3,436,050) and further in view of Cresswell (2002/0050716).

**Regarding Claims 1 and 2,** Geffcken in view of Burgdorf teaches an adjustable mirror holding device. (See above.)

**Regarding Claims 6 and 7,** Geffcken in view of Burgdorf and further in view of Tibbals teaches an adjustable mirror holding device comprising stable threaded interfaces. (See above.)

**Regarding Claims 10-13**, Geffcken in view of Burgdorf and further in view of Tibbals does not explicitly teach a spring element such that the adjusting pins are acted upon with a radial pressure force by the spring element resting on all the adjusting pins; a snap ring, which spreads apart under initial tension and which rests inside the pitch circle defined by the adjusting pins and acts upon the adjusting pins with a radially outward-oriented pressure force; or that the snap ring has a twist preventer. However, Cresswell teaches two spring elements which exert radial forces: a snap ring [70]; and a twist ring [66]. (See Cresswell, figs. 1-4) Since Geffcken, Burgdorf, Tibbals and Isenberg teach attachments subject to motion, it would have been obvious to one of ordinary skill in the art, at the time of the invention to have the spring elements taught by Cresswell because this configuration frustrates the loosening of the male screw from the female bore. (See Creswell, p. 5, par. [0045], ll. 26- 30. ) One would have been motivated to make this modification because prevention of unintended loosening of attachment points may make it more likely that the optical device will be properly aligned.

***Claims 1-2, 6-7, and 14***

6. **Claims 1 –7 and 13 - 14 are rejected** under 35 U.S.C. 103(a) as being obvious over Geffcken et al. (2,147,156) in view of Burgdorf et al. (2004/0102888), further in view of Tibbals (3,436,050) and further in view of Kaplan (3,171,322).

**Regarding Claims 1 and 2,** Geffcken in view of Burgdorf teaches an adjustable mirror holding device. (See above.)

**Regarding Claims 6 and 7,** Geffcken in view of Burgdorf and further in view of Tibbals teaches an adjustable mirror holding device comprising stable threaded interfaces. (See above.)

**Regarding Claim 14**, Geffcken in view of Burgdorf, and further in view of Tibbals, does not explicitly teach that the spring element is embodied as an axially slit clamping sleeve, which is inserted into a receiving hole made in the mirror holder; and the receiving hole has a radial spacing from the threaded bore such that the clamping sleeve presses radially against the adjusting pin. However, Kaplan teaches a sleeve [10] with a split (aperture [11]) which anchors a threaded object (bolt [13]) in a pre-drilled hole (not shown but inherent to the description). (See

Kaplan, fig. 1) Since Geffcken, Burgdorf, Tibbals and Kaplan teach attachments subject to motion, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the device of Geffcken in view of Burgdorf, and further in view of Tibbals to have the split-sleeve configuration taught by Kaplan because this configuration engages the threaded features [14] of the bolt [13]. (See Kaplan, col. 2, ll. 32-33) One would have been motivated to make this modification because prevention of unintended loosening of threaded attachment points may make it more likely that the optical device will be properly aligned.

***Claims 1 and 15-16***

7. **Claims 1 and 15-16 are rejected** under 35 U.S.C. 103(a) as being obvious over Geffcken et al. (2,147,156) in view of Burgdorf et al. (2004/0102888), and further in view of Wallace et al. (5,329,347).

From hereinafter, Wallace will stand-in for Wallace et al.

**Regarding Claim 1,** Geffcken in view of Burgdorf teaches an adjustable mirror holding device. (See above.)

**Regarding Claims 15 and 16,** Geffcken in view of Burgdorf does not explicitly teach a laser range finding device comprising a folded optic mirror configuration. However, Wallace teaches a laser rangefinder device comprising folded-mirror [32] configuration comprising at least one deflection mirror, located in one axis of an optical path, for folding the optical axis of the optical path. (See Wallace, figs. 1 and 2) Since Geffcken, Burgdorf, and Wallace all teach optical devices, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Geffcken in view of Burgdorf to have the range finding configuration taught by Wallace because the resultant configuration would combine the transmission and reception functions of laser range finding. (See Wallace et al., col. 2., ll. 33-36 and ll. 65-67) One would have been motivated to make this modification because the adjustable features of the mirrors may enhance the optical system of the range finder.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to Form 892 for additional references cited but not used in this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Radkowski whose telephone number is (571) 270-1613. The examiner can normally be reached on Monday - Thursday, 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (517) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, See http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call (800) 786-9199 (IN USA OR CANADA) or (571) 272-1000.

/James P. Hughes/

/Peter P. Radkowski/ 3/27/2008 Examiner, Art Unit 2883